REMARKS

In response to the Office Action dated May 26, 2004, the above amendments to the claims have been made. No new matter has been added. Examination of the above-referenced application is respectfully requested.

Specification Objection

The disclosure stands objected to because of an informality in paragraph [0049]. Paragraph [0049] has been amended to change "6" to -7 --, as suggested by the Examiner to refer to the correct figure. Removal of this objection is respectfully requested.

Claim Rejections 35 USC 112

Claims 8, 9, and 11-13 stand rejected under 35 USC 112, second paragraph. In particular, the Examiner noted that Claim 8 recited "PMT detector" and Claim 11 recites elements with insufficient antecedent basis.

Claim 8 has been amended to recite the "PET detector", thus correcting a typographical error. Claim 11 has been amended to include the subject matter necessary to provide proper antecedent basis for the remaining elements of the claim. No new matter has been entered.

It is respectfully submitted that the amendments to claims 8 and 11 satisfy the Examiner's concerns with respect to 35 USC 112, second paragraph, and it is respectfully requested that the rejection of these claims be removed.

Claim Rejections 35 USC 103

Claims 1, 14, 19, 24, 25, and 26 stand rejected under 35 USC 103(a) as being unpatentable over Bertelsen in view of Levy et al.

Claims 1, 14, and 19 have been canceled, thus rendering the rejection of these claims moot. The subject matter of Claim 1 has been incorporated into Claim 2, such that Claim 2 is now rewritten into independent form. The subject matter of Claim 14 has been incorporated into Claim 15, such that Claim 15 is now rewritten into independent form. The subject matter of Claim 19 has been incorporated into Claim 20, such that Claim 20 is now rewritten into

independent form. It is noted that the amendments to Claims 2, 15, and 20 do not narrow the scope of these claims because they have only been rewritten into independent form.

Claim 24 has been amended to include the subject matter of Claim 2, and Claim 26 has been amended to include the subject matter of Claim 20. Claim 25 has been amended to correct a typographical error. Claim 26 has also been amended to replace the acronym "ALC" with "acquisition, locator and coincidence". The acronym is defined in the specification in paragraph [0031]. No new matter has been added.

It is respectfully noted that neither Bertelsen nor Levy et al disclose the features of, during the calibration period for each unit crystal, multiplying the calibration spectrum and crystal specific gain factor to generate a shifted spectrum for the crystal and combining shifted spectrums for all unit crystals to generate a unit spectrum. These features, in part and/or in combination with other recited features, define the recited claims over Bertelsen and Levy et al, and it is respectfully submitted that the currently amended claims clearly define over the applied prior art and allowance is respectfully requested.

Double Patenting

Claims 2-13, 15-18, and 20-23 stand rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20 of U.S. Patent No. 6,624,422 in view of Bertelsen and Levy et al.

As U.S. Patent No. 6,624,422 is commonly owned with this application, a terminal disclaimer has been filed with this Amendment. Thus, it is respectfully submitted that the double patenting rejection of Claims 2-13, 15-18, and 20-23 is rendered moot in view of this submission.

Furthermore, since all of the pending claims include all of the subject matter from at least one of claims 2, 11, 15, and 20, and with U.S. Patent No. 6,624,422 being removed as a reference, it is respectfully submitted that all of the pending claims are patentable over the prior art and allowance is respectfully requested.

CONCLUSION

The claims have been amended as described above. No new matter has been added. Reconsideration of the above-referenced application is respectfully requested.

Any fees associated with this Amendment are dealt with in the accompanying transmittal sheet. However, should any further fees be deemed necessary, please charge them to deposit account number 06-1130, maintained by Applicants' representatives.

In furtherance of this application, the Examiner is cordially requested to contact the undersigned at any time during examination of this application.

Respectfully submitted,
CANTOR COLBURN LLP

 $\mathbf{R}\mathbf{v}$

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